Listing of the Claims

This listing of the claims shall replace all prior versions and listings of the claims in this application

1. (Canceled)

2. (Canceled)

3. (Currently amended) A process for attaching an α-amino protected amino acid or peptide having an unprotected C-terminus to another amino acid or peptide which is protected by an α- amino protecting group and which is attached to a support during solid phase peptide synthesis comprising:
    a) cleaving the α-amino protecting group either from the amino acid attached to the support or from the peptide attached to the support;-
    b) performing a thorough washing; and
    c) adding an α-amino protected amino acid or peptide having an unprotected C-terminus and coupling it either to the amino acid that is attached to the support or to the peptide that is attached to the support, and that now has an unprotected N-terminus, to form an amide bond;

wherein a phosphonium, sulfonium, or quaternary ammonium salt which is soluble in a solvent used in this process is added in step ~~a),~~ b) ~~or c), and wherein, if the salt is added in step c), the solvent is neither a chloroform/phenol nor a chloroform/trifluoroethanol mixture~~, and wherein the quaternary ammonium salt is selected from the group consisting of benzyltrimethylammonium hydroxide, benzyltrimethylammonium chloride and benzyltrimethylammonium carbonate, the phosphonium salt is tetrabutylphosphonium bromide and the sulfonium salt is triethylsulfonium tetrafluoroborate.

4. (Previously presented) The process according to claim 3, which additionally comprises the following step:
    d) performing a thorough washing;

    wherein step d) is performed after step c).

5. (Cancelled)

6. (Cancelled)

7. (Cancelled)

8. (Currently amended) A process for attaching an α-amino protected amino acid or peptide having an unprotected C-terminus to another amino acid or peptide which is protected by an α-amino protecting group and which is attached to a support during solid phase peptide synthesis comprising:

    a) cleaving the α-amino protecting group either from the amino acid attached to the support or from the peptide attached to the support;
    b) performing a thorough washing;
    c) adding an α-amino protected amino acid or peptide having an unprotected C-terminus and coupling it either to the amino acid that is attached to the support or to the peptide that is attached to the support, and that now has an unprotected N-terminus, to form an amide bond; and
    d) performing another thorough washing:

wherein ~~at least~~ in step d), a phosphonium, sulfonium, or quaternary ammonium salt which is soluble in a solvent used in this step is added, and wherein the quaternary ammonium salt is selected from the group consisting of benzyltrimethylammonium hydroxide, benzyltrimethylammonium chloride and benzyltrimethylammonium carbonate, the phosphonium salt is tetrabutylphosphonium bromide and the sulfonium salt is triethylsulfonium tetrafluoroborate.

9. (Canceled)

10. (Canceled)

11. (Canceled) -

12. (Cancelled)

13. (Previously presented) The process according to claim 3, wherein the α-amino protecting group is Fmoc (9-fluorenylmethoxycarbonyl) or Nsc (p-nitrophenylsulphonylethoxycarbonate) or any other base-cleavable protecting group.

14. (Previously presented) The process according to claim 3, wherein the α-amino protecting group is Boc (tert-butoxycarbonyl), Trt (trityl), Bpoc (2-p-biphenylisopropyloxycarbonyl) or any other acid-cleavable protecting group.

15. (Previously presented) The process according to claim 3, wherein the α-amino protecting group is selected so that neither acid nor base treatment is required for its cleavage.

16. (Previously presented) The process for synthesizing a peptide of a desired sequence comprising:

a) attaching a first amino acid or peptide, having an α-amino protecting group, via its C-terminus to a functionalized support;
b) performing the process according to claim 3 with the next amino acid or peptide in said desired sequence;
c) repeating step b with the appropriate amino acids or peptides until the desired sequence is achieved; and
d) cleaving the assembled peptide from the support by an appropriate method.

17. (Canceled)

18. (Canceled)

19. (Previously presented) The process for synthesizing a peptide according to claim 16, wherein no wash step is performed between step a) of claim 16 and step b) of claim 16.

20. (New) The process according to claim 8, wherein the α-amino protecting group is Fmoc (9-fluorenylmethoxycarbonyl) or Nsc (p-nitrophenylsulphonylethoxycarbonate) or any other base-cleavable protecting group.

21. (New) The process according to claim 8, wherein the α-amino protecting group is Boc (tert-butoxycarbonyl), Trt (trityl), Bpoc (2-p-biphenylisopropyloxycarbonyl) or any other acid-cleavable protecting group.

22. (New) The process according to claim 8, wherein the α-amino protecting group is selected so that neither acid nor base treatment is required for its cleavage.